

Amendment to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-36 (Cancelled)

36. (Original) A slurry for chemical mechanical planarization of a substrate comprising silica having an aggregate of primary particles, said aggregate having an aggregate size of less than one (1) micron, and said silica having an DHP oil absorption value of at least 150 milliliters per 100 grams of silica.

Claims 37-45 (Cancelled)

46. (Previously Presented) A silica comprising:

(a) an aggregate of primary particles, said primary particles having an average diameter of at least fifteen (15) nanometers, wherein said aggregate has an aggregate size of less than one (1) micron; and

(b) a hydroxyl content of at least seven (7) hydroxyl groups per nanometer squared.

47. (Previously Presented) A silica comprising:

(a) an aggregate of primary particles, said primary particles having an average diameter of at least seven (7) nanometers, wherein said aggregate has an aggregate size of less than one (1) micron; and

(b) a hydroxyl content of at least ten (10) hydroxyl groups per nanometer squared.

48. (Previously Presented) The silica of claim 47 wherein said hydroxyl content is at least fifteen (15) hydroxyl groups per nanometer squared.

49. (Previously Presented) A slurry composition comprising:

(a) silica having an aggregate of primary particles, said primary particles having an average diameter of at least fifteen (15) nanometers, said aggregate having an aggregate size of less than one (1) micron, and said silica having a hydroxyl content of at least seven (7) hydroxyl groups per nanometer squared; and

(b) a liquid.

50. (Previously Presented) A slurry composition comprising:

(a) silica having an aggregate of primary particles, said primary particles having an average diameter of at least seven (7) nanometers, said aggregate having an aggregate size of less than one (1) micron, and said silica having a hydroxyl content of at least ten (10) hydroxyl groups per nanometer squared; and

(b) a liquid.

51. (Previously Presented) The slurry composition of claim 50 wherein said hydroxyl content is at least fifteen (15) hydroxyl groups per nanometer squared.

52. (Previously Presented) A slurry composition comprising:

(a) silica having an aggregate of primary particles, said primary particles having an average diameter of at least seven (7) nanometers, said aggregate having an aggregate size of less than one (1) micron, and said silica having a hydroxyl content of at least seven (7) hydroxyl groups per nanometer squared;

(b) a liquid; and

(c) oxidizing agent selected from inorganic and organic per-compounds, bromic acid, chloric acid, nitrates, sulfates, or mixtures thereof.

53. (Previously Presented) The slurry composition of claim 52 wherein said oxidizing agent is selected from urea-hydrogen peroxide, hydrogen peroxide, or a mixture thereof.

54. (Previously Presented) A slurry composition comprising:

(a) silica having an aggregate of primary particles, said primary particles having an average diameter of at least seven (7) nanometers, said aggregate having an aggregate size of less than one (1) micron, and said silica having a hydroxyl content of at least seven (7) hydroxyl groups per nanometer squared;

(b) a liquid;

(c) polyvalent cation sequestrant; and

(d) corrosion inhibitor.

55. (Previously Presented) The slurry composition of claim 54 wherein said polyvalent cation sequestrant is selected from carboxylic acids, polycarboxylic acids, amino acids, polyamino acids, dipeptides, polyimines, phosphoric acids, polyphosphoric acids, or mixtures thereof.

56. (Previously Presented) The slurry composition of claim 54 wherein said polyvalent cation sequestrant is selected from glycine, histidine, phytic acid, or mixtures thereof.

57. (Previously Presented) The slurry composition of claim 54 wherein said corrosion inhibitor is selected from polycarboxylic acids, polyamino acids, amino acids, imines, azoles, carboxylated azoles, mercaptans, or mixtures thereof.

58. (Previously Presented) The slurry composition of claim 54 wherein said corrosion inhibitor is selected from histidine, phytic acid or a mixture thereof.

59. (Previously Presented) The slurry composition of claim 54 further comprising a thickener.

60. (Previously Presented) A slurry composition comprising:

(a) silica having an aggregate of primary particles, said primary particles having an average diameter of at least seven (7) nanometers, said aggregate having an aggregate size of less than one (1) micron, and said silica having a hydroxyl content of at least seven (7) hydroxyl groups per nanometer squared;

(b) a liquid; and

(c) phytic acid.

61. (Previously Presented) A slurry for polishing a microelectronic substrate, said slurry comprising precipitated silica having an aggregate of primary particles, said primary particles having an average diameter of at least seven (7) nanometers, wherein said aggregate has an aggregate size of less than one (1) micron, and a hydroxyl content of at least seven (7) hydroxyl groups per nanometer squared, wherein said slurry provides a removal of at least one material selected from copper, tantalum and silicon dioxide from said microelectronic substrate.

62. (Previously Presented) The slurry of claim 61 wherein rate of removal of tantalum is equal to or greater than rate of removal of copper.

63. (Previously Presented) The slurry of Claim 61 wherein said silica has a BET to CTAB ratio of at least 1.2 or greater.